

REMARKS

By this Amendment, Claims 1 and 6 are amended. No new matter is involved. Support for the amendments to claim 1 is found, for example, on pages 8 and 9 of the main body of the specification and in original claims 4 and 5. Support for the amendment to claim 6 is found, for example, in Fig. 4 and its associated description in the main body of the specification.

Restriction Requirement

Claim 10 is allegedly directed to an invention independent and distinct from the invention originally claimed. Applicants respectfully disagree.

Claim 10 recites a plasma display product produced by using a roll punch manufactured according to the process of manufacturing a roll punch that is recited in claim 1. As such, the features of the plasma display product are not being claimed in a mutually exclusive manner from the process of claim 1. In other words, claim 10 recites all of the features of claim 1 and, therefore, does not claim an invention in a mutually exclusive manner from what is recited in claim 1. Compare, in this regard MPEP §806.04(f), which indicates that it is not proper to restrict such claims.

Please note that this argument is not an admission that claims 1 and 10 are not patentably distinct.

Accordingly, reconsideration and withdrawal of this restriction/election requirement and examination on the merits of claim 10 are respectfully requested.

Rejections Under 35 U.S.C. §103(a)

Claims 1, 3 and 6-9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over JP 61-231181 ("JP '181") in view of JP-02-149603 ("JP '603"). This rejection is respectfully traversed.

Initially, Applicants note that the Examiner is relying on an English language abstract of both Japanese patent documents and has not provided a translation of those entire documents, which are in the Japanese language. Accordingly, the rejection is limited to the English language Abstract, and not to the entire references. Compare, in this regard, the unpublished decision by the USPTO Board of Patent Appeals and Interferences in Ex parte Jones, 62 USPQ2d 1206 (BdPatApp&Int 2001).

Because the rejection is based on 35 U.S.C. §103, what is in issue in such a rejection is "the invention as a whole," not just a few features of the claimed invention. Under 35 U.S.C. §103, "[a] patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art

to which said subject matter pertains." The determination under section 103 is whether the claimed invention as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. See In re O'Farrell, 853 F.2d 894, 902, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988). In determining obviousness, the Examiner must explain what the differences between the claimed invention and the prior art are and provide objective factual evidence to support a conclusion that it would be obvious to one of ordinary skill in the art to achieve the claimed invention, which includes those missing features.

In the second place, in rejecting claims under 35 U.S.C. §103, it is incumbent on the Examiner to establish a factual basis to support the legal conclusion of obviousness. See, In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal Inc. v. F-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985),

cert. denied, 475 U.S. 1017 (1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a *prima facie* case of obviousness. Note, In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be suggested or taught by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1970). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

A showing of a suggestion, teaching, or motivation to combine the prior art references is an “essential evidentiary component of an obviousness holding.” C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not “evidence.” See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617 (Fed. Cir. 1999).

JP ‘181 fails to disclose a number of positively recited features of the claimed invention. For example, JP ‘181 does not disclose or suggest a roll

punch, or a forming roll for a roll punch, as recited. Instead, JP '181 discloses a "heat radiator."

Nor does JP '181 disclose or suggest immersing the intermediate product in an etching tank, positioning at least one ultrasonic vibrator in the etching tank at a side other than the top or bottom of the immersion tank, and etching said intermediate product at the mask-free parts by radiating ultrasonic waves to produce grooves in the punch at a desired depth, thickness and sidewall inclination angle, as recited.

The Office Action admits that JP '181 does not teach etching using ultrasonic waves. In an attempt to remedy this admitted deficiency, the Office Action turns to JP '683, that allegedly "discloses using ultrasonic etching to provide etched grooves having uniform depth.

The Office Action then discusses the motivation for using ultrasonic waves, but never explicitly applies this teaching to JP '181.

Applicants respectfully submit that one of ordinary skill in the art would not be motivated to turn to JP '683 to modify JP '181.

Firstly, JP '181's heat radiator pipe grooves 8 are disclosed as having an "almost semicircular shape," this semicircular shape being clearly shown in Fig. 2. The inside surface of JP '181's grooves 8 is also shown as varying greatly both in width and in depth because of its semicircular nature, and as

having a very uneven surface, which would be consistent with a heat radiator but would be inconsistent with a roll punch.

Secondly, JP '683 uses a single ultrasonic generator located at the bottom of a tank to obtain a precise depth. Applicants respectfully submit that one of ordinary skill in the art would not be motivated to use an ultrasonic etching device to obtain a precise groove depth in JP '181 because JP '181 teaches away from this by providing a groove with widely variable depth throughout its semicircular shape and because it clearly shows a very uneven interior surface of its grooves.

Furthermore, claim 1, as amended, positively recites a combination of features including positioning at least one ultrasonic vibrator in the etching tank at a side other than the top or bottom of the immersion tank. JP '683's ultrasonic generator is clearly located at the bottom of its tank.

Furthermore, claim 6 positively recites using two ultrasonic vibrators placed at opposite sides of the intermediate product. This feature is not disclosed in any of the applied references.

Furthermore, claim 8 positively recites an etching step that includes etching intermediate product at the mask-free parts within an etching tank provided with at least one ultrasonic vibrator by radiating ultrasonic waves from said at least one ultrasonic vibrator towards the mask-free parts while

rotating said intermediate product. None of the applied references disclose or suggest this feature that includes etching while rotating the intermediate product.

Accordingly, the Office Action has not made out a *prima facie* case of proper motivation to modify JP '181 in view of JP '683, as suggested.

Lastly, the office Action cites two case law decisions to absolve itself of the responsibility of treating all of the features of the claimed invention. Applicants respectfully submit that the cases that are cited have nothing to do with method-of-making claims, and are solely directed to apparatus claims that recite structure.

Reconsideration and withdrawal of this rejection of claims 1, 3 and 6-9 is respectfully requested.

Claims 4 and 5 stand rejected under 35 U.S.C. §103(a) as unpatentable over JP '161 in view of JP '683 as applied to claim 9, in view of U.S. Patent 5,747,931 to Riddle et al. ("Riddle"). This rejection is respectfully traversed.

Initially, Applicants note that the JP '181 and JP '683 reference combination is improper at least for reasons discussed above. Nor is Riddle applied to supply these deficiencies. Accordingly, even if it were proper to modify the base reference combination as suggested in view of Riddle, the

modified version of the base reference combination would still not render the claimed invention obvious.

The Office Action admits that neither JP '181 nor JP '683 discloses forming a roll punch with vertical side walls. In an attempt to remedy this deficiency, the Office Action turns to Riddle. Riddle discloses an embossing die 70 that is formed by etching or electroforming a metal plate, and also discloses embossing rollers 72 and 74, the method of making these rollers not being disclosed.

The Office Action fails to present any objective factual evidence of proper motivation for one of ordinary skill in the art to turn to Riddle to modify JP '181, which discloses a hollow heat pipe with semicircular grooves having uneven inner surfaces, in view of a embossing plate or embossing roller.

The only apparent reason for turning to Riddle is solely based on Applicants' disclosure, which may not properly be used against them.

Accordingly, the Office Action fails to make out a *prima facie* case of proper motivation to turn to Riddle to modify JP '181's heat pipe.

Furthermore, the Office Action improperly fails to address the positively recited features of the roll punch made by the claimed method, as recited in detail in claims 4 and 5. In this regard, Applicants respectfully submit that all

words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

None of the applied references discloses or suggests the positively recited features in claims 4 and 5.

Accordingly, the Office Action fails to make out a *prima facie* case of obviousness of the claimed invention.

Claims 1, 2 and 6-9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over JP 10-193024 ("JP '024") in view of JP-02-149683 (JP '683). This rejection is respectfully traversed.

JP '024 does not disclose a roll punch, as recited. Nor does JP '024 disclose or suggest immersing an intermediate product in an etching tank, positioning at least one ultrasonic vibrator in the etching tank at a side other than the top or bottom of the immersion tank, and etching said intermediate product at the mask-free parts by radiating ultrasonic waves to produce grooves in the punch at a desired depth, thickness and sidewall inclination angle, as recited.

The Office Action admits that JP '024 does not disclose ultrasonic etching.

In an attempt to remedy this deficiency, the Office Action turns to JP '683, that allegedly "discloses using ultrasonic etching to provide etched grooves having uniform depth."

The Office Action then discusses the motivation for using ultrasonic waves, but never explicitly applies this teaching to JP '024.

Applicants respectfully submit that one of ordinary skill in the art would not be motivated to turn to JP '683 to modify JP '024.

Firstly, JP '204 only discloses that the surface of roll 102 is marked up to the prescribed depth, and only uses an etching liquid, showing no need for going to the trouble and expense of ultrasonic etching, and no need to produce grooves in the punch at a desired depth, thickness and sidewall inclination angle, as recited.

Secondly, JP '683 uses a single ultrasonic generator located at the bottom of a tank to obtain a precise depth. Applicants respectfully submit that one of ordinary skill in the art would not be motivated to use an ultrasonic etching device to obtain a precise groove depth in JP '024 because JP '024 already discloses achieving this with just an etching liquid.

Thirdly, neither reference discloses producing grooves in a roll punch at a desired depth, thickness and sidewall inclination angle, as recited.

Fourthly, claim 1, as amended, positively recites a combination of features including positioning at least one ultrasonic vibrator in the etching tank at a side other than the top or bottom of the immersion tank. JP '683's ultrasonic generator is clearly located at the bottom of its tank.

Furthermore, claim 6 positively recites using two ultrasonic vibrators placed at opposite sides of the intermediate product. This feature is not disclosed in any of the applied references.

Furthermore, claim 8 positively recites an etching step that includes etching intermediate product at the mask-free parts within an etching tank provided with at least one ultrasonic vibrator by radiating ultrasonic waves from said at least one ultrasonic vibrator towards the mask-free parts while rotating said intermediate product. None of the applied references disclose or suggest this feature that includes etching while rotating the intermediate product.

Accordingly, the Office Action has not made out a *prima facie* case of proper motivation to modify JP '024 in view of JP '683, as suggested.

Lastly, the office Action cites two case law decisions to absolve itself of the responsibility of treating all of the features of the claimed invention. Applicants respectfully submit that the cases that are cited have nothing to do

with method-or-making claims, and are solely directed to apparatus claims that recite structure.

Reconsideration and withdrawal of this rejection of claims 1, 2 and 6-9 is respectfully requested.

Claims 4 and 5 stand rejected under 35 U.S.C. §103(a) as unpatentable over JP '024 in view of JP '683 as applied to claim 9, in view of U.S. patent 5,747,931 to Riddle et al. ("Riddle"). This rejection is respectfully traversed.

Initially, Applicants note that the JP '024 and JP '683 reference combination is improper at least for reasons discussed above. Nor is Riddle applied to supply these deficiencies. Accordingly, even if it were proper to modify the base reference combination as suggested in view of Riddle, the modified version of the base reference combination would still not render the claimed invention obvious.

The Office Action admits that neither JP '024 nor JP '683 discloses forming a roll punch with vertical side walls. In an attempt to remedy this deficiency, the Office Action turns to Riddle. Riddle discloses an embossing die 70 that is formed by etching or electroforming a metal plate, and also discloses embossing rollers 72 and 74, the method of making these rollers not being disclosed.

The Office Action fails to present any objective factual evidence of proper motivation for one of ordinary skill in the art to turn to Riddle to modify JP '024, which has no disclosure of being used to make plasma display device structures, in view of an embossing plate or embossing roller to make such devices.

The only apparent reason for turning to Riddle is solely based on Applicants' disclosure, which may not properly be used against them.

Accordingly, the office Action fails to make out a *prima facie* case of proper motivation to turn to Riddle to modify JP '204.

Furthermore, the Office Action improperly fails to address the positively recited features of the roll punch made by the claimed method, as recited in detail in claims 4 and 5. In this regard, Applicants respectfully submit that all words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

None of the applied references discloses or suggests the positively recited features in claims 4 and 5.

Accordingly, the Office Action fails to make out a *prima facie* case of obviousness of the claimed invention.

Reconsideration and withdrawal of these rejections of claims 1-9 are respectfully requested.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. It is believed that a full and complete response has been made to the outstanding Office Action, and that the present application is in condition for allowance.


However, if there are any outstanding issues, the Examiner is invited to telephone Robert J. Webster, Reg. No. 46,472, at 703-205-8000, in an effort to expedite prosecution.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

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